

A COMPARATIVE ANALYSIS OF MACEDONIAN AND BULGARIAN
GROWTH MODEL: CURRENT PERSPECTIVES AND FUTURE
CHALLENGES

BULGARIAN-MACEDONIAN TALKS

Assistant Professor, PhD, Darko Lazarov
Faculty of Economics, University Goce Delcev

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Introduction

The main aim of the analysis is to **investigate the growth models** of both countries in an comparative dimension

The growth accounting based **on production, consumption and sectoral approach** is applied to estimate the contribution of each factor which determinant the rate of economic growth

The long-run and sustainable economic growth is based on **export upgrading and productivity improvements**

The economic performance of both countries

Indicators	2000-2016		2000		2017	
	Macedonia	Bulgeria	Macedonia	Bulgeria	Macedonia	Bulgeria
Employment in industry (% of total employment)	31.5	32.6	33.5	32.8	29.8	29.3
Employment in services (% of total employment)	48.9	59.0	43.3	54.0	53.8	64.5
Exports of goods and services (% of GDP)	38.9	49.8	32.9	36.5	55.1	66.3
Exports of goods and services (annual % growth)	7.3	6.4	18.6	-17.2	9.2	4.0
Foreign direct investment, net inflows (% of GDP)	4.7	9.5	5.8	7.6	3.8	2.9
GDP per capita (constant 2010 US\$)	4219	6191	3449	3955	5245	8312
GDP growth (annual %)	2.7	3.6	4.9	4.5	0.0	3.5
Industry (including construction), value added (% of GDP)	21.4	24.4	21.4	22.7	23.1	24.5
Manufacturing, value added (% of GDP)	9.9	13.2	9.0	12.1	11.8	15.0
Unemployment, total (% of total labor force)	32.0	11.4	32.2	16.2	22.4	6.2

Production approach

Growth sources based on production approach in Macedonia, 2000-2016

Growth accounting	2000-2016		
	Growth rate,	Absolute contribution	Relative contribution
a=0.33			
Physical capital (K)	1.22	1.22	45
Labor (L)	3.44	1.13	42
Total Factor Productivity (TFP/A)	0.35	0.35	13
GDP - Q	2,7%	2.7%	100%

Source: Authors' calculation based on UN and World Bank database

Growth sources based on production approach in Bulgaria, 2000-2016

Growth accounting	2000-2016		
	Growth rate	Absolute contribution	Relative share
a=0,33			
Physical capital (K)	6.50%	2.15%	59.55%
Labor (L)	0.41%	0.27%	7.47%
Total factor Productivity (TFP/A)	1.43%	1.19%	32.96%
GDP - Q	3.61%	3.61%	100 %

Source: Authors' calculation based on UN and World Bank database

Consumption (demand-side) approach

Growth sources based on demand-side approach in Macedonia, 2000-2016

Growth sources	2000-2016		
	Growth rate	Absolute contribution, %	Relative contribution%
Households consumption including NIPIS	2.7	2.02	75.85
Government spending	1.9	0.32	12.15
Gross fixed capital formation	6.6	1.73	64.98
Export of goods and services	6.7	2.68	100.18
Import of goods and services	7.1	4.12	-152.59
Net export	7.9	-1.42	-52.43
Gross Domestic Product	2.7%	2.7%	100%

Source: Authors' calculations based on data from State Statistical Office of RM

Growth sources based on demand-side approach in Bulgaria, 2000-2016

Growth sources	2000-2016		
	Growth rate	Absolute contribution, %	Relative contribution, %
Households consumption including NIPIS	4.24%	2.95%	83.98%
Government spending	1.14%	0.20%	5.56%
Gross fixed capital formation	6.50%	1.54%	43.91%
Changes in inventory	6.50%	0.12%	3.51%
Export of goods and services	7.62%	3.64%	103.68%
Import of goods and services	8.30%	-5.00%	-142.36%
Net export	/	-1.36	-39,32%
Gross Domestic Product	3.61%	3.61%	100.00%

Source: Authors' calculations based on data from National Statistical Institute of RB

Sectorial approach

Sectors sources of economic growth in Macedonia, 2000-2016

SECTORS	2000-2016		
	Growth rate	Absolute contribution, %	Relative contribution, %
Agriculture, hunting, forestry and Fishing (A+B)	1.43	0.13	4.76
Mining and quarrying, and Electricity, gas and water supply (C+E)	0.70	0.03	0.99
Manufacturing (D)	3.77	0.35	13.04
Construction (IF)	5.49	0.42	15.92
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, Hotels and restaurants (ISICG-H)	4.03	0.66	24.63
Transport, storage and communication (I)	6.73	0.31	11.71
Financial services and insurance	5.81	0.18	6.91
Property services	-0.84	-0.11	-4.10
Business services	10.28	0.27	10.07
Government services	0.92	0.12	4.58
Other households services	0.05	0.01	0.32
Value Added	2.76	2.37	88.84
Net taxes on products	2.11	0.3	11.16
GDP - Gross Domestic Product	2.7%	2.7%	100%

Source: Authors' calculations based on data from State Statistical Office of RM

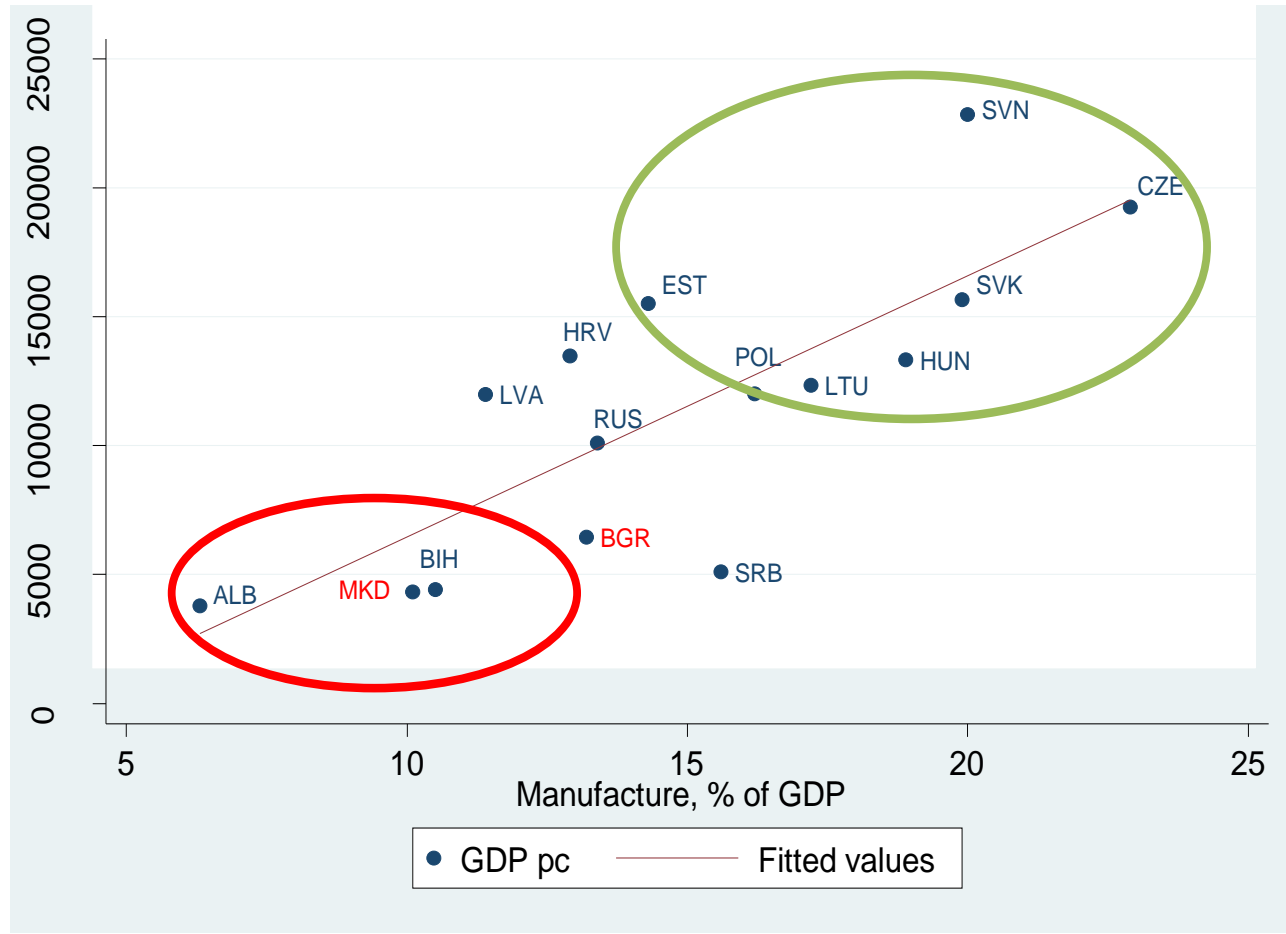
Sectorial approach

Sectors sources of economic growth in Bulgaria, 2000-2016

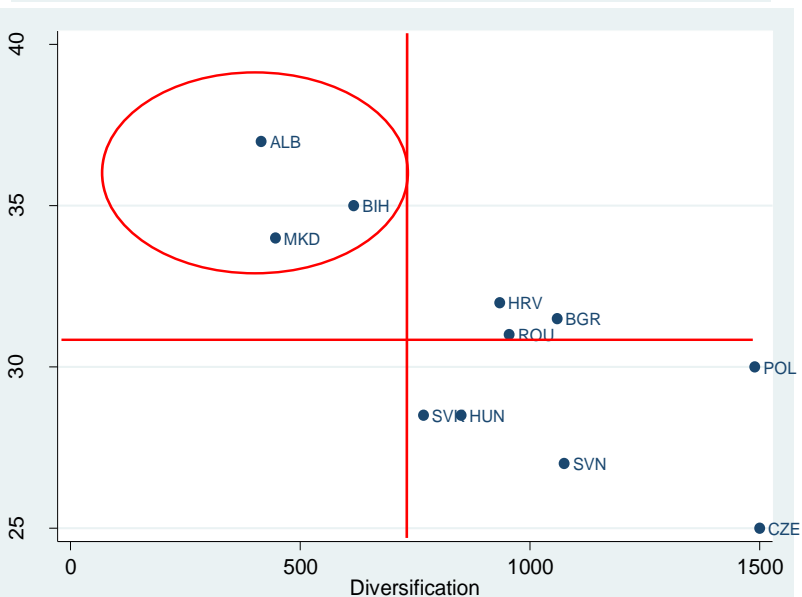
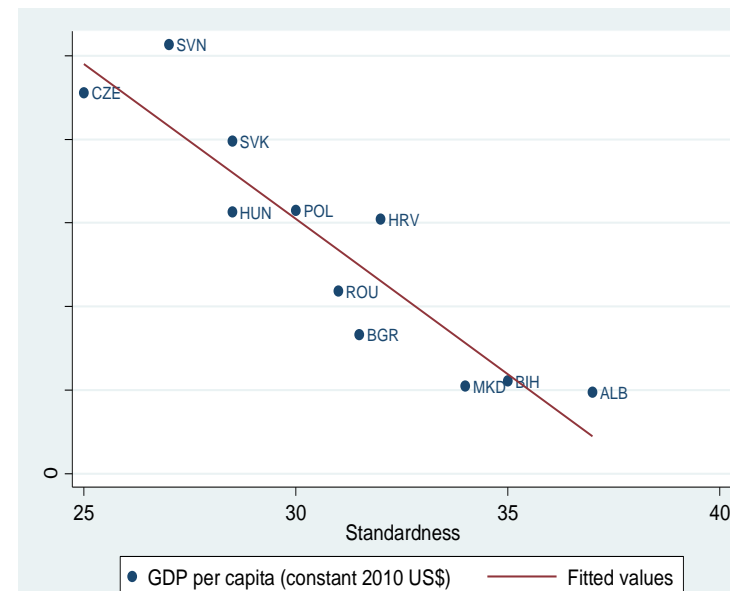
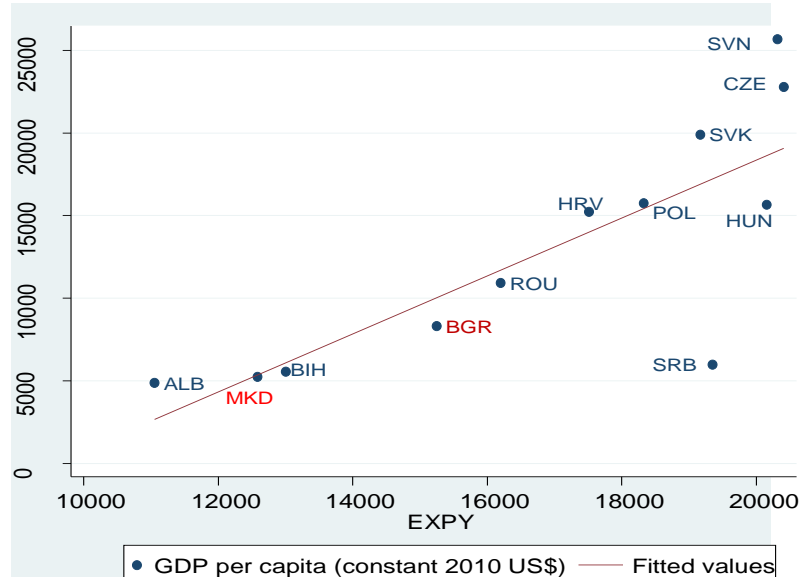
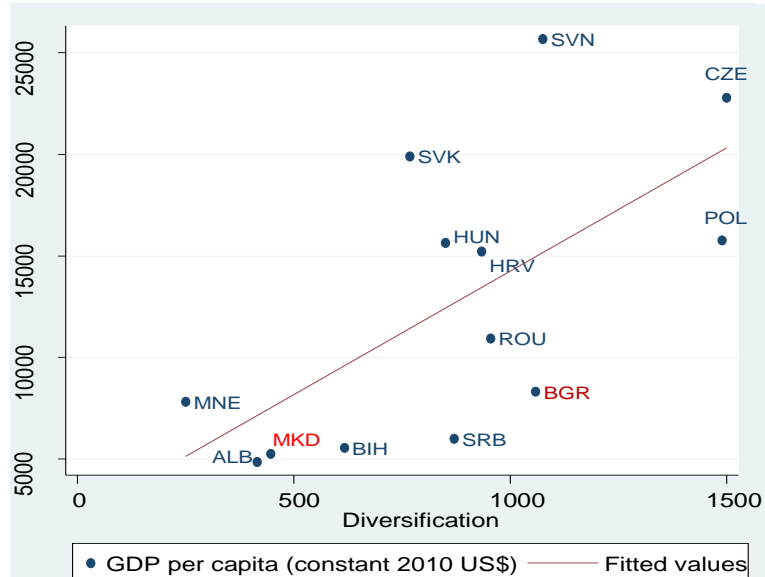
SECTORS	2000-2016		
	Growth rate	Absolute contribution, %	Relative contribution, %
Agriculture, hunting, forestry and Fishing (A+B)	-0.96%	-0.06%	-1.69%
Mining and quarrying, and Electricity, gas and water supply (C+E)	1.95%	0.10%	2.93%
Manufacturing (D)	4.29%	0.59%	16.68%
Construction (IF)	3.35%	0.18%	5.24%
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, Hotels and restaurants (ISICG-H)	5.31%	0.67%	18.94%
Transport, storage and communication (I)	5.17%	0.52%	14.87%
Other private and public services (IJ-P)	3.39%	1.11%	31.65%
Value Added	3.42%	2.95%	83.93%
Net taxes on products	4.33%	0.60%	17.06%
GDP - Gross Domestic Product	3.61%	3.61%	100.00%

Source: Authors' calculations based on data from National Statistical Institute of RB

Manufacturing performance and economic growth



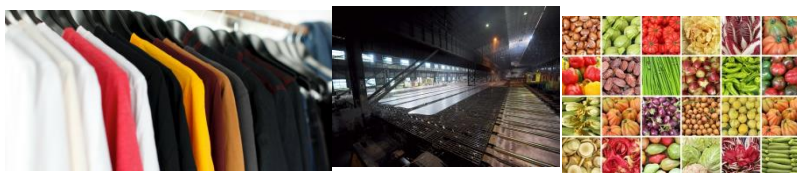
Export performance and economic growth





Macedonia

Export – 5.4 billion euros
447 exporting products



3000 exporting companies



80 exporting countries



Bulgaria

Export – 26.1 billion euros
1050 извозни производи



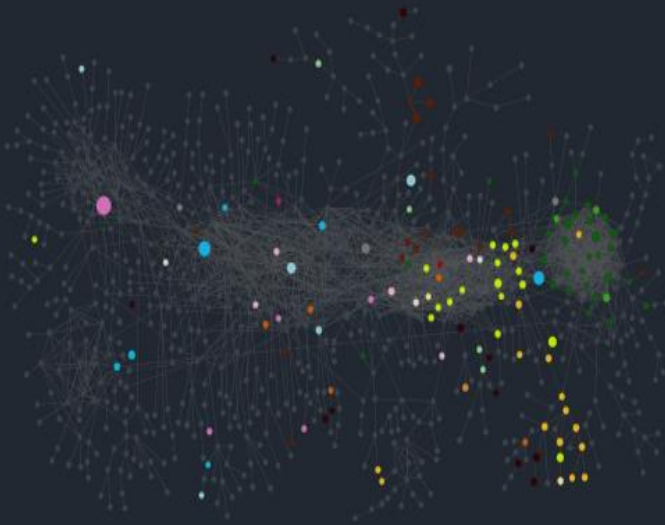
9000 exporting companies



140 exporting countries



Total: \$5.46B
5.46 billion US\$ Macedonian export structure



26.5 billion US\$ Bulgarian export structure



Macedonia export

Chemical industry –

1.2 bill. \$ (22%)

Machinery industry –

1.17 bill. \$ (21%)

Textile industry –

700 mill. \$ (13%)

Metals – 589 mill. \$ (11%)

Bulgarian export

Machinery industry –

4.8 bill. \$ (18%)

Metals – 3.9 bill. \$ (15%)

Mineral – 3.04 bill. \$ (11%)

Textile industry –

2.65 bill. \$ (10%)

Vegetable – 2.2 bill. \$ (9%)

Chemicals – 2.1 bill. \$ (9%)

Conclusion

Bulgaria has recorded better economic performance compare to Macedonia in the analyzed period.

The Bulgarian growth is driven by **quantitative factor** (investments in physical capital) and **qualitative factor** (Total Factor Productivity), while the Macedonian growth is based **only on quantitative changes** (investments in physical capital and labour)

The opportunities for long-run and sustainable economic growth is much obvious for Bulgaria than for Macedonia based on the analysis of export structure position of both countries.

Questions and answers

Thank you for your attention!